

**Bensiinijaamad. Osa 4: Ohutus- ja keskkonnanõuded mõõtepumpadel ja tankuritel kasutamiseks mõeldud pöördpumpade valmistamisele ja jõudlusele**

**Petrol filling stations - Part 4: Safety requirements for construction and performance of swivels for use on metering pumps and dispensers**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 13617-4:2012 sisaldab Euroopa standardi EN 13617-4:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 13617-4:2012 consists of the English text of the European standard EN 13617-4:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 14.03.2012.	Date of Availability of the European standard is 14.03.2012.
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ICS 75.200

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English Version

## Petrol filling stations - Part 4: Safety requirements for construction and performance of swivels for use on metering pumps and dispensers

Stations-service - Partie 4: Exigences relatives à la construction et aux performances de sécurité des raccords tournants utilisés sur les distributeurs de carburants

Tankstellen - Teil 4: Sicherheitstechnische Anforderungen an Bau- und Arbeitsweise von Drehgelenken für Zapfsäulen und druckversorgte Zapfsäulen

This European Standard was approved by CEN on 28 January 2012.

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## Foreword

This document (EN 13617-4:2012) has been prepared by Technical Committee CEN/TC 393 "Equipment for tanks and filling stations", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13617-4:2004.

According to edition EN 13617-4:2004 the following fundamental changes are given:

- a new note at the end of the scope: 'Fuels other than of Explosion Group IIA are excluded from this European Standard' added;
- informative Annex B concerning environmental aspects added.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directives.

For relationship with EU Directives, see informative Annex ZA, which is an integral part of this standard.

The present standard is composed of the following parts:

- *Part 1: Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units;*
- *Part 2: Safety requirements for construction and performance of safe breaks for use on metering pumps and dispensers;*
- *Part 3: Safety requirements for construction and performance of shear valves;*
- *Part 4: Safety requirements for construction and performance of swivels for use on metering pumps and dispensers.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard specifies safety requirements for the construction and performance of swivels to be fitted to delivery hose assemblies on metering pumps and dispensers installed at filling stations and used to dispense liquid fuels into the tanks of motor vehicles, boats and light aircraft and into portable containers at flow rates up to 200 l min<sup>-1</sup>. It pays particular attention to electrical, mechanical and hydraulic characteristics of swivels.

The requirements apply to swivels at ambient temperatures from –20 °C to +40 °C with the possibility for an extended temperature range.

This European Standard applies mainly to hazards related to the ignition of liquid fuels being dispensed or their vapour. This European Standard also addresses electrical and mechanical hazards of swivels.

This European Standard is not applicable to swivels for the dispensing of any compressed gas.

NOTE 1 This European Standard does not apply to equipment for use with liquefied petroleum gas (LPG) or liquefied natural gas (LNG) or compressed natural gas (CNG).

NOTE 2 Fuels other than of Explosion Group IIA are excluded from this European Standard.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 228, *Automotive fuels — Unleaded petrol — Requirements and test methods*

EN 1127–1, *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology*

EN 1360, *Rubber and plastic hoses and hose assemblies for measured fuel dispensing systems — Specification*

EN 13012:2001, *Petrol filling stations — Construction and performance of automatic nozzles for use on fuel dispensers*

EN 13463-1:2009 *Non-electrical equipment for use in potentially explosive atmospheres — Part 1: Basic method and requirements*

EN 13483, *Rubber and plastic hoses and hose assemblies with internal vapour recovery for measured fuel dispensing systems — Specification*

prEN 13617–1:2010 *Petrol filling stations — Part 1: Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units*

EN 13617-2:2012, *Petrol filling stations — Part 2: Safety requirements for construction and performance of safe breaks for use on metering pumps and dispensers*

EN 60079-0, *Explosive atmospheres — Part 0: Equipment — General requirements*

EN ISO 228–1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1)*

EN ISO 1825, *Rubber hoses and hose assemblies for aircraft ground fuelling and defuelling — Specification (ISO 1825)*

EN ISO 8031:2009, *Rubber and plastics hoses and hose assemblies — Determination of electrical resistance and conductivity (ISO 8031:2009)*

ISO 261, *ISO general-purpose metric screw threads — General plan*

ISO 965-2, *ISO general purpose metric screw threads — Tolerances — Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality*

ISO 11925-3, *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 3: Multi-source test*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13012:2001, prEN 13617-1:2010 and EN 13617-2:2012 and the following apply:

#### 3.1

##### **swivel**

device fitted between nozzle and metering pump or dispenser to allow rotational movement

#### 3.2

##### **single plane swivel**

swivel with one plane of rotation

#### 3.3

##### **dual plane swivel**

swivel with two planes of rotation

### 4 Explosion protection measures

**4.1** Explosion protection measures shall be taken in accordance with EN 1127-1 and Annex B of EN 13617-1:2012.

**4.2** The swivel shall be explosion protected and shall be Category 2 in accordance with EN 13463-1. The vapour path of a vapour recovery swivel shall be Category 1 in accordance with EN 13463-1. The swivel shall fulfil the requirements for temperature Class T3 and Group IIA to EN 60079-0 or EN 13463-1.

### 5 Construction

#### 5.1 General

All electrical and non-electrical equipment and components, intended for use in potentially explosive atmospheres, shall be designed and constructed according to good engineering practice and in conformity with the required categories for Group II equipment to ensure avoidance of any ignition source. To classify the category of the equipment it shall be subjected to an ignition hazard assessment in accordance with 5.2 of EN 13463-1:2009.

Materials used in the construction shall be chemically and dimensionally stable under known service conditions. Materials likely to come into contact with fuels in both liquid and vapour phases shall be resistant to attack by these fuels. Conformity shall be demonstrated by manufacturer's declaration and by the tests detailed in Annex A.

Light alloys when used shall conform to the requirements of 6.4.4.2 of EN 13463-1:2009. If other specifications for explosion protected equipment impose more stringent requirements than the more stringent requirement shall apply.